REDUCTION OF THE GENERA PIQUERIOPSIS AND ILTISIA TO MICROSPERUM (ASTERACEAE-EUPATORIEAE)

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Preparation of a treatment of the Asteraceae of Mexico (Turner and Nesom, in prep.) has occasioned an evaluation of the monotypic genera Piqueriopsis R. M. King and Iltisia S. F. Blake, especially as these relate to Microspermum Lag.

Microspermum, as previously treated, is a genus of eight species, all of these confined to montane habitats of tropical and subtropical Mexico. Rzedowski (1970, 1972) has rendered an excellent account of the genus but would exclude the closely related Iltisia of Costa Rica and Panama. However, he clearly perceived the two taxa to be sister-groups, stating

> Al comparar material de Iltisia repens con el de Microspermum se pudieron confirmar notables similitudes entre ambos generos, particularmente en cuanto a habito, indumento, morfologia de las hojas, de la corola, del androceo y del aquenio se refiere. Sin embargo, se detectaron los siguientes caracteres diferenciales:

Nevertheless, as he notes, there seem to be several characters which appear to distinguish them. He lists these as follows:

Microspermum	Iltisia
1. Peripheral florets bilabiate	1. not so (regular)
2. Submarginal florets zygomorphic	2. not so (regular)
3. Stylar appendages linear or subulate	3. Stylar appendages triangular
4. Ectexine of pollen ca as thick as the endexine	4. Ectexine twice as thick as the endexine
5. Corolla lobes (4)5(6)	5. Corolla lobes (3)4(5)

Pertinent to the above listing is the recent description of Iltisia echnadiensis King & H. Rob. of Costa Rica and adjacent Panama which is said to be a generally larger plant than the closely related I. repens but "differs markedly in the asymmetry of the peripheral flowers which have expanded outer lobes similar to those of the related genus Microspermum of Mexico". They note, however, that the characteristic 4-lobed condition is but a pair divided to the base, rather than a group of three

fused for half their length as in Microspermum.

Indeed, if one looks at the range of variation found in the eight species of Microspermum. There is not a single character, or significant group of characters, that might serve to distinguish between Microspermum and Iltisia. Thus I agree with Williams (1961) who views Iltisia as but a reduced Microspermum. I would also include in the latter the minute, monotypic, Piqueriopsis. While King (1965) compared the latter taxon with Piqueria, it would appear on all accounts to be a much-reduced member of Microspermum. He noted that the 8-10 ribbed achenes and 4-lobed corollas would distinguish it from other genera of the subtribe Piquerinae (cf. also King, 1967), but 8-ribbed achenes and 4-lobed corollas also occur in Microspermum (McVaugh, 1984; per. obs.), with which Piqueriopsis is certainly most closely allied.

In short, inclusion of Iltisia and the much-reduced Piqueriopsis in an "expanded" Microspermum makes sense on morphological, ecological and biogeographical grounds, for all share the same general characters, occupy similar ecological niches and occur in cool montane regions mostly along the Pacific slopes.

My nomenclature and generally accont of the genera Iltisia and Piqueriopsis follows:

MICROSPERMUM REPENS (Blake) L. Wms., Fieldiana, Bot. 9:371. 1961.

Iltisia repens Blake, J. Washington Acad. Sci. 47:409. 1959. TYPE: COSTA RICA. CARTAGO: Cerro de la Muerte, 3400-3500 m, 25 Jul 1949, Holm & Iltis (holotype MO!).

Iltisia echandiensis King & H. Rob., Phytologia 56:251. 1984. TYPE: COSTA RICA/PANAMA. PUNTA ARENAS/BOCAS DEL TORO: Cordillera de Talamanca, Cerro Echandi, on the international border, 3050-3160m, 22 Aug 1983, Davidse et al. 23854 (holotype US; isotype MO!)

ADDITIONAL SPECIMENS EXAMINED: COSTA RICA. CARTAGO/SAN JOSE: NW of La Asuncion, 3000-3200m, 27 Oct 1975, Burger & Baker 9507 (F); Cerro Enchandi, 3700m, Aug 1983, Gomez et al. 21866 (MO); Cerro de la Muerte, 26 Aug 1967, Raven 22054 (F,GH,MSC,TEX). PANAMA: "1-2 km SWW of Itamut camp", Bocas del Toro, 3175m, 6-7 Mar 1984, Gomez et al. 22594 (F).

I consider Iltisia echandiensis to be but a form of

Microspermum repens with zygomorphic peripheral florets. In fact most of the peripheral florets of the above cited specimens have, more or less, zygomorphic corollas, the difference being one of degree and not quality.

MICROSPERMUM MICHOACANUM (R. King) B. Turner, comb. nov.

Based upon Piqueriopsis michoacana R. King, Brittonia 17:352.1965.

Known only from the TYPE: MEXICO. MICHOACAN: vicinity of Uruapan, ca 6100 ft, 11-15 Oct 1961, King & Soderstrom 4700 (holotype US; isotypes TEX!, etc).

A remarkably delicate, much-reduced species, originally placed in the monotypic Piqueriopsis and said to have relationships with Piqueria but clearly much closer to Microspermum, having most of the features of M. gracillimum Rzed.

LITERATURE CITED

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